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EXAMINER

ZHEN, LI B

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 06/01/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/289,789

Applicant(s)

RUBERG, ALAN T.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 71-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 71-101 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 71 – 101 are pending in the application.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 71 – 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,546,419 to Humpleman [cited in previous office action] in view of U.S. Patent No. 5,974,444 to Konrad [cited in previous office action].

4. As to claim 71, Humpleman teaches the invention substantially as claimed including:

a network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25];

a device service [remote service application; column 11, line 50 – column 12, line 10] at the server domain [middleware layer 98 can be located in a third device 96 or in a separate control hub; column 16, lines 50 – 60] requesting the peripheral device [server devices 14, Fig. 3; column 5, lines 5 – 13];

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a remote bus proxy [proxy through a translation server] at the server domain [middleware layer 98 can be located in a third device 96 or in a separate control hub; column 16, lines 50 – 60] communicating with the peripheral device [sending device 120 can send the data to the receiving device 122 by proxy through a translation server 124, Fig. 23; column 27, lines 13 – 32];

a remote device driver [control program] at the desktop unit [source server device 14] and locally coupled to the peripheral device [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42]; and

a device manager [Network Object Request Broker such as Home Network Object Request Broker, HNORB 79, Fig. 19; column 16, lines 39 – 61] at the server domain [middleware layer 98 can be located in...a separate control hub; column 16, lines 50 – 60].

5. Humpleman teaches controlling access to remote devices [the HNORB 79 and the IL 80, can be connected directly to the Internet, such that selected home devices can be accessed from outside of a local home network 10...authorized users with the appropriate stream encryption can access a DVD changer in the user's primary home; column 16, lines 51 – 61] but does not specifically disclose controlling communications between the device server and remote device driver and approving requests to read or send data to remote devices and control accessibility to the remote devices.

However, Konrad teaches a device manager [Service Provider: owner or manager of a desired service; col. 7, lines 48 – 51] for controlling communications

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between the device service and the remote device driver [enabling the Service Provider to retain control over who initiates a connection to the Desired Utility Service and receives its benefits; col. 12, lines 13 – 28], approving requests to read or send data to remote devices and controlling accessibility to the remote devices [boundary created to prevent or limit incoming request to particularly authorized requests or requests from an authorized Requester; col. 7, lines 12 – 15].

6. It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of controlling communications between the device server and remote device driver and approving requests to read or send data to remote devices and control accessibility to the remote devices as taught by Konrad to the invention of Humpleman because this provides greater control for security and filtering purposes and lessens the chance that an untrained Client may cause disruption to the service [col. 6, lines 52 – 57 of Konrad].

7. As to claim 73, Humpleman teaches providing access to one or more remote devices over a network, comprising:

a desktop domain having a plurality of devices [server devices 14, Fig. 3; column 5, lines 5 – 13];

a network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25];

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a server domain [middleware layer 98 can be located in... a separate control hub; column 16, lines 50 – 60] coupled to the desktop domain via the network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25];

a remote device driver [control program] coupled to one or more devices [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42];

a plurality of driver services [remote service application... controls service programs 20; column 11, line 50 – column 12, line 10] configured to remotely control one or more of the devices [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42], wherein the remote device driver tracks which of the plurality of driver services communicates with which of the plurality of devices [a session manager 36 with a user interface for displaying selection information for a user to select and control the server devices 14 SERVER1, SERVER2 and other server devices 14 such as SERVER3 and SERVER4, Fig. 9; column 8, lines 3 - 16];

a device manager [HNORB] configured to register [register method] one or more of the plurality of driver services with the remote device driver to access one or more of the devices [a device 14 can remotely call a "register" method of HNORB to pass the device interface as one or more parameters; column 17, lines 10 – 15];

the plurality of driver services [remote service application... controls service programs 20; column 11, line 50 – column 12, line 10] and the device manager

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[Network Object Request Broker... HNORB 79, Fig. 19; column 16, lines 39 – 61] reside in the server domain [middleware layer 98 can be located in a third device 96 or in a separate control hub; column 16, lines 50 – 60];

the plurality of driver services and the device manager are coupled across the network [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42] to the remote device driver [control program]; and

the remote device driver resides in the desktop unit domain [source server device 14]. As to a device manager that approve requests to read data from one or more of the devices, see the rejection to claim 71 above.

8. As to claim 87, Humpleman teaches providing access to one or more remote devices over a network, comprising:

receiving by a device manager [Network Object Request Broker such as Home Network Object Request Broker, HNORB 79, Fig. 19; column 16, lines 39 – 61] at a server domain [middleware layer 98 can be located in... a separate control hub; column 16, lines 50 – 60] of a device request from a driver service [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42];

registering [register method] by the device manager [HNORB] of the driver service with a remote device driver [a device 14 can remotely call a "register" method of

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HNORB to pass the device interface as one or more parameters; column 17, lines 10 – 15] at the desktop domain [source server device 14; column 8, lines 30 – 42]; and

communicating by the driver service [remote service application; column 11, line 50 – column 12, line 10] with a remote device via the remote device driver [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42]. As to controlling accessibility to the remote device, see the rejection to claim 71 above.

9. As to claim 99, Humpleman teaches providing access to one or more peripheral devices over a network, comprising:

a wide area network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25];

a plurality of peripheral devices [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42];

a Human Interface Device locally coupled to the peripheral devices [server device itself may reduce the processing and storage requirements of the client devices 12 in networks with several server devices 14; column 5, lines 25 – 33], the HID comprising a remote device driver coupled to the plurality of peripheral devices [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42]; and



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a server [middleware layer 98 can be located in... a separate control hub; column 16, lines 50 – 60] coupled to the HID over the wide area network, the server comprising:

a plurality of driver services [remote service application... controls service programs 20; column 11, line 50 – column 12, line 10] configured to remotely control the HID [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42], wherein the remote device driver tracks which of the one or more driver services communicates with which of the one or more devices [a session manager 36 with a user interface for displaying selection information for a user to select and control the server devices 14 SERVER1, SERVER2 and other server devices 14 such as SERVER3 and SERVER4, Fig. 9; column 8, lines 3 - 16]; and

a device manager [HNORB] configured to register [register method] one or more of the driver services with the remote device driver to access one or more of the plurality of peripheral devices [a device 14 can remotely call a "register" method of HNORB to pass the device interface as one or more parameters; column 17, lines 10 – 15]. As to approving requests to read and send data from the one or more remote devices, see the rejection to claim 71 above.

10. As to claim 72, Humpleman teaches a wide area network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25] and the device manager is further adapted to discover the device service [HNORB 79 includes a software agent

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for use by one device 14 to discover the existence of other devices 14 connected to the network 10, Fig. 19; column 16, lines 44 – 50], enable the device service to use the remote devices via the remote device driver [HNORB software agent organizes device names into a naming hierarchical tree structure, organizes device interfaces into said searchable Interface Library, and provides device interfaces to a device requesting interface information; column 16, lines 46 – 50], notify other device services of an availability of the remote devices [HNORB and IL can provide the controller device A with a reference to the controlled device B, whereby the device A can generate remote calls to the device B native functions just as calls to the local device A native function; column 18, lines 17 – 28], and track a connection of the remote devices with the device service [device 14 and the HNORB&IL can establish a point-to-point Transmission Control Protocol, TCP, or User Datagram Protocol, UDP, connection for registration, interface request and fetch, and device lookup services; column 17, lines 2 – 10].

11. As to claim 74, Humpleman teaches the desktop unit domain comprises a plurality of Human Interface Devices [server device itself may reduce the processing and storage requirements of the client devices 12 in networks with several server devices 14; column 5, lines 25 – 33] locally connected to the plurality of devices which are the peripherals of the plurality of HIDs [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42], and the server domain comprises a plurality

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of servers [middleware layer 98 can be located in...a separate control hub; column 16, lines 50 – 60].

12. As to claim 75, Humpleman teaches the plurality of devices are separate from the server domain and the network comprises a wide area network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25].

13. As to claim 76, Humpleman teaches the plurality of HIDs can only operate the plurality of devices via the plurality of driver services residing in the server domain [server device itself may reduce the processing and storage requirements of the client devices 12 in networks with several server devices 14; column 5, lines 25 – 33].

14. As to claim 77, Humpleman as modified teaches the remote device driver resides in a Human Interface Device for providing a user interface [Human Interface Service supports computer-human interaction between the Local Host and the user; col. 9, lines 13 – 22 of Konrad] to operate the one or more of the plurality of devices [user manipulates the Human Interface Service to specify services desired; col. 9, lines 28 – 40 of Konrad].

15. As to claim 78, Humpleman teaches a bus device driver locally coupling the remote device driver to the plurality of devices [communication link 16 can include a

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1394 serial bus providing a physical layer for sending and receiving data between the various connected home devices; column 4, lines 40 – 46], and a bus proxy remotely [proxy through a translation server] coupling the plurality of driver services to the remote device driver [sending device 120 can send the data to the receiving device 122 by proxy through a translation server 124, Fig. 23; column 27, lines 13 – 32].

16. As to claim 79, Humpleman as modified teaches the one or more of the plurality of devices are locally connected to the HID [remote host comprises a multiplicity of computer inter-operating together; col. 9, lines 5 – 22 of Konrad], and the HID can only operate the one or more of the plurality of devices via the plurality of driver services [source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42 of Humpleman].

17. As to claim 80, Humpleman as modified teaches a session manager configured to associate one or more sessions with one or more of the driver services [a dedicated data connection...for conveyance of Request among a multiplicity of Remote Host computers such that Request can be conveyed successfully from the Remote Object Client to a Desired Utility Service; col. 11, lines 33 – 39 of Konrad] and an authentication manager configured to associate the one or more session with the HID [enabling the Service Provider to retain control over who initiates a connection to the Desired Utility Service and receives its benefits; col. 12, lines 13 – 28 of Konrad].

18. As to claims 81 – 83, Humpleman as modified teaches notifying a first driver service of a loss of a network connection to a first device when an associated session of the HID ends [reports status, including termination, of the Remote Object Client, to the Starter Server; col. 12, lines 7 – 15 of Konrad].

19. As to claim 84, Humpleman as modified teaches the device manager is further configured to enforce a device access policy [boundary] for registering the one or more driver services [boundary created to prevent or limit incoming request to particularly authorized requests or requests from an authorized Requester; col. 7, lines 12 – 15 of Konrad].

20. As to claim 85, Humpleman teaches the device manager is further configured to locate the one or more devices and to maintain an inventory of the one or more devices and respective controlling driver services [HNORB and IL can provide the controller device A with a reference to the controlled device B, whereby the device A can generate remote calls to the device B native functions just as calls to the local device A native function; column 18, lines 17 – 28].

21. As to claim 86, Humpleman as modified teaches the remote device driver comprises a filter for permitting and denying access by one or more of the driver services [boundary created to prevent or limit incoming request to particularly

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authorized requests or requests from an authorized Requester; col. 7, lines 12 – 15 of Konrad] and wherein the filter is provided by the device manager via the network [Server can now provide for greater control for security and filtering purposes; col. 6, lines 50 – 60 of Konrad].

22. As to claim 88, this is rejected for the same reasons as claim 83 above.

23. As to claim 89, Humpleman as modified teaches locally exposing the remote device to the remote device driver via a bus device driver [communication link 16 can include a 1394 serial bus providing a physical layer for sending and receiving data between the various connected home devices; column 4, lines 40 – 46 of Humpleman].

24. As to claim 90, Humpleman as modified teaches associating a session with the driver service via a session manager [connection manager; col. 12, lines 15 – 30 of Konrad], and associating the session with a Human Interface Device via an authentication manager [enabling the Service Provider to retain control over who initiates a connection to the Desired Utility Service and receives its benefits; col. 12, lines 13 – 28 of Konrad].

25. As to claims 91 and 92, these are rejected for the same reasons as claims 79 and 84 above.

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26. As to claim 93, Humpleman as modified teaches maintaining in the remote device driver an association between the remote device and the driver service [distinguishes among the Remote Object based upon the identifier of the Desired Utility Service-Remote Object combination; col. 13, lines 5 – 15 of Konrad].

27. As to claims 94 and 95, these are rejected for the same reasons as claims 85 and 81 above.

28. As to claim 96, Humpleman as modified teaches the loss of the network connection to the remote device [Remote Object Client is terminated; col. 18, lines 22 – 36 of Konrad] is in response to the closing of an associated session by a user on a Human Interface device [Terminate Session Button; col. 13, lines 52 – 55 of Konrad].

29. As to claims 97 and 98, these are rejected for the same reasons as claims 82 and 75 above.

30. As to claim 100, Humpleman teaches the plurality of driver services [remote service application; column 11, line 50 – column 12, line 10] are separated from the HID via the wide area network [home network 10, Fig. 19].

31. As to claim 101, this is rejected for the same reasons as claim 72, above.

***Response to Arguments***

32. Applicant's arguments filed March 11, 2004 have been fully considered but they are not persuasive.

Applicant argues, "...there is no teaching or suggestion to combine Humpleman's client-centric system with Konrad's server-centric system" [p. 1, lines 18 – 20].

Examiner respectfully disagrees because examiner never suggested combining a client-centric system with a server-centric system. The Konrad reference was relied upon to provide the teaching controlling access to devices such as sending data to and reading data from the devices. Examiner notes that Humpleman teaches controlling access to devices [col. 16, lines 51 – 61], but Humpleman does not specifically define the access as reading and sending data. Accordingly, the Konrad references was used to specifically teaches controlling access to devices on a network wherein the access to the device includes reading and sending data [see rejection to claim 71 above].

Therefore, the references are combinable for the reasons suggested by Konrad [col. 6, lines 52 – 57 of Konrad].

The applicant argues, "...the two references still do not disclose or suggest a computer network system that has a device locally attached to the desktop domain" [p. 1, lines 24 – 28]. Examiner respectfully disagrees because the examiner interprets the desktop as an entity with a processor, memory, display and a graphical user interface and Humpleman teaches DTV [col. 6, lines 35 – 60], which will read on a desktop, and the DTV and each device has an address [col. 17, lines 30 – 45].



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Applicant argues, " ... Humpleman's network is not a true network..." [p. 2, line 15]. Examiner respectfully disagrees because Humpleman teaches a network [second sever device 14 (device-to-device or service-to-service) for devices or services that are world wide web (Web) enabled and Internet enabled; col. 12, lines 10 - 25].

### ***Conclusion***

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen  
Examiner  
Art Unit 2126

lbz  
May 26, 2004



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